

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method of breaking a substrate of brittle material, the method comprising acts of:

providing a substrate of a brittle material,

focusing a laser beam on an ~~exposed surface of~~ the substrate to heat the ~~exposed surface of~~ the substrate with the laser beam to create a heated spot on the ~~exposed surface of~~ the substrate,

moving the laser beam and the substrate with respect to each other to create a line of heated spots on the ~~exposed surface of~~ the substrate,

selecting a cooling medium of an aqueous surfactant solution to bond to broken siloxane bonds as a micro-crack is formed on the substrate,

cooling the heated spots on the substrate by locally applying a the cooling medium such that a the micro-crack is formed in the line of heated spots is ~~propagated on the exposed surface of~~ the substrate, and

breaking the substrate along the line of the ~~propagated micro-crack~~ by applying a force on the substrate

~~wherein the cooling medium comprises an aqueous surfactant solution.~~

2. (Previously presented) The method of breaking a substrate of brittle material according to claim 1, wherein the cooling medium further comprises air mixed with the aqueous surfactant solution.

3. (Previously presented) The method of breaking a substrate of brittle material according to claim 1, wherein the concentration of the surfactant is in the range of 0.01 to 1% of weight.

4. (Previously presented) The method of breaking a substrate of brittle material according to claim 1, wherein the aqueous surfactant solution comprises a cationic surfactant.

5. (Previously presented) The method of breaking a substrate of brittle material according to claim 4, wherein the cationic surfactant comprises cetyl trimethyl ammonium bromide (CTAB).

6. (Previously presented) The method of breaking a substrate of brittle material according to claim 1, wherein the aqueous surfactant solution comprises a nonionic surfactant.

7. (Previously presented) The method of breaking a substrate of brittle material according to claim 6, wherein the nonionic surfactant comprises octadecyl deca(ethyleneoxide) hydroxide.

8. (Previously presented) The method of breaking a substrate of brittle material according to claim 1, wherein the aqueous surfactant solution comprises an anionic surfactant.

9. (Previously presented) The method of breaking a substrate of brittle material according to claim 8, wherein the anionic surfactant comprises dodecylbenzene sulfonic acid sodium salt.

10. (Previously presented) The method of breaking a substrate of brittle material according to claim 1, wherein the brittle material comprises one or more of glass, crystalline silica and ceramics.

11. (Currently amended) A method of breaking a substrate of brittle material, the method comprising acts of:

providing a substrate of a brittle material,

focusing a laser beam on an exposed surface of the substrate to heat the exposed surface of the substrate with the laser beam to create a heated spot on the exposed surface of the substrate,

moving the laser beam and the substrate with respect to each other to create a line of heated spots on the exposed surface of the substrate,

cooling the heated spots on the substrate by locally applying an aqueous surfactant solution such that a micro-crack in the line of heated spots is propagated on the exposed surface of the substrate and the aqueous surfactant solution enters the micro-crack, and

breaking the substrate along the line of the propagated micro-crack by applying a force on the substrate, wherein the aqueous surfactant solution enters the micro-crack prior to the breaking act, wherein the aqueous surfactant solution is selected to bond to broken siloxane bonds in the micro-crack.

12. (Canceled)

13. (Previously presented) The method of breaking a substrate of brittle material according to claim 11, wherein the aqueous surfactant solution further comprises air mixed with the aqueous surfactant solution.

14. (Previously presented) The method of breaking a substrate of brittle material according to claim 11, wherein the concentration of the aqueous surfactant solution is in the range of 0.01 to 1% of weight.

15. (Previously presented) The method of breaking a substrate of brittle material according to claim 11, wherein the aqueous surfactant solution comprises a cationic surfactant.

16. (Previously presented) The method of breaking a substrate of brittle material according to claim 15, wherein the cationic surfactant comprises cetyl trimethyl ammonium bromide (CTAB).

17. (Previously presented) The method of breaking a substrate of brittle material according to claim 11, wherein the aqueous surfactant solution comprises a nonionic surfactant.

18. (Previously presented) The method of breaking a substrate of brittle material according to claim 17, wherein the nonionic surfactant comprises octadecyl deca(ethylenoxide) hydroxide.

19. (Previously presented) The method of breaking a substrate of brittle material according to claim 11, wherein the aqueous surfactant solution comprises an anionic surfactant.

20. (Previously presented) The method of breaking a substrate of brittle material according to claim 19, wherein the anionic surfactant comprises dodecylbenzene sulfonic acid sodium salt.